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IN THE CLAIMS

This listing of claims replaces all prior versions and listing of claims in the application:

1. (currently amended) A method of producing a ~~human pluripotent stem reprogrammed~~ cell from a human adult somatic cell comprising treating said adult somatic cell with a first agent that promotes demethylation of nucleic acids, a second agent that inhibits the deacetylation of histone proteins, and a third agent that promotes the arrest of cells in metaphase, wherein the adult somatic cell, subsequent to treating with the first agent, the second agent and the third agent, is a ~~pluripotent stem~~~~reprogrammed~~ cell, wherein the reprogrammed cell which (a) expresses a telomerase gene product and (b) is capable of expressing a gene product selected from the group consisting of neurofilament, cardiac actin and alpha-antitrypsin.
2. (canceled)
3. (previously amended) The method of claim 1 wherein the first agent is 5-aza-2'-deoxycytidine.
4. (previously amended) The method of claim 1 comprising treating said adult somatic cell with 5-aza-2'-deoxycytidine, trichostatin A and Tat-cyclin B.
5. (original) The method of claim 1 wherein the adult somatic cell is a keratinocyte.
- 6-7. (canceled)
8. (currently amended) The method of claim 4 wherein (a) the adult somatic cell is a keratinocyte and (b) the reprogrammed cell, after treatment with retinoic acid, expresses a gene product selected from the group consisting of neurofilament, cardiac actin and alpha-antitrypsin.
- 9-20. (canceled)
21. (previously presented) The method of claim 1 wherein the second agent is trichostatin A.

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22. (previously presented) The method of claim 1 wherein the third agent is Tat-cyclin B.

23. (withdrawn) A method of producing a reprogrammed keratinocyte comprising treating a keratinocyte in vitro with a first agent that promotes demethylation of nucleic acids, a second agent that inhibits deacetylation of histones and a third agent that promotes the arrest of mammalian cells in metaphase; wherein the reprogrammed keratinocyte expresses a telomerase gene product and is capable of expressing a gene product selected from the group consisting of neurofilament, cardiac actin and alpha-antitrypsin.

24. (withdrawn) The method of claim 23 wherein the first agent is 5-aza-2' deoxycytidine.

25. (withdrawn) The method of claim 23 wherein the second agent is selected from the group consisting of trichostatin A and sodium butyrate.

26. (withdrawn) The method of claim 25 wherein the second agent is trichostatin A.

27. (withdrawn) The method of claim 23 wherein the third agent is selecting from the group consisting of Tat-cyclin B, cyclin-A, cyclin-B, c-Mos, colchicine, and colcemid.

28. (withdrawn) The method of claim 27 wherein the third agent is Tat-cyclin B.

29. (withdrawn) The method of claim 23 wherein the keratinocyte is a human keratinocyte.

30. (withdrawn) The method of claim 23 wherein the first agent is 5-aza-2' deoxycytidine, the second agent is trichostatin A, and the third agent is Tat-cyclin B.

31. (withdrawn) The method of claim 30 comprising treating the reprogrammed keratinocyte with retinoic acid, wherein the reprogrammed keratinocyte after treating with the retinoic acid expresses a gene product selected from the group consisting of neurofilament, cardiac actin and alpha-antitrypsin.

32. (withdrawn) The method of claim 31 wherein the gene product is a human cardiac actin RNA.

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33. (withdrawn) The method of claim 30 wherein the keratinocyte is a human keratinocyte.